Remarks

Claims 13-41 are pending in this application.

Claims 31 and 37 have been revised to more accurately point out the disclosed invention. The amendatory matter at claim 31 finds support in original claims 2 and 3; and the amendment to claim 37 is needed for completeness. No new matter is involved.

The applicants hereby elect the examiner's Group I (claims 13, 19, 21, 24, 27 and 38).

The election is made with traverse. The reasons advanced by the examiner to support his holding of lack of unity of invention are not well taken. Whether the person of ordinary skill in this art would or would not choose to use a polymeric binder (adhesive) or a bonding layer is not seen to rise to the level of patentable distinctness. This is a matter of mere choice to the engineer.

An action on the merits is solicited.

To the extent necessary, applicant(s) petition for an Extension of Time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,
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***VERSION WITH MARKINGS TO SHOW CHANGES MADE***

Please amend claims 31 and 37 as follows:

31.(amended) A composite comprising

at least one first layer Aa or at least one first layer Ab, or at least one first layer Aa and at least one first layer Ab,

at least one second layer B, each as defined in claim 14, and

C) at least one bonding layer.

37.(amended) An electrochemical cell comprising a composite as claimed in claim 31 or a combination of two or more thereof.

***COPY OF ALL CLAIMS***

13. A composite comprising

Aa) at least one first layer which comprises a mixture I1, comprising a mix IIa consisting of

a) from 1 to 95% by weight of a solid III, preferably a basic solid III, having a primary particle size of from 5 nm to 20 µm and

b) from 5 to 99% by weight of a polymeric composition IV obtainable by polymerization of

b1) from 5 to 100% by weight, based on the composition IV, of condensation product V of

α) at least one compound VI which is able to condense with a carboxylic acid or a sulfonic acid as defined in β or a derivative or a mixture of two or more thereof, and

β) at least 1 mol per mol of the compound VI of a carboxylic acid or sulfonic acid VII which contains at least one free-radically polymerizable functional group, or a derivative thereof or a mixture of two or more thereof,

and

b2) from 0 to 95% by weight, based on the composition IV, of a further compound VIII having a mean molecular weight (number average) of at least 5000 and polyether segments in the main chain or a side

chain,

where the proportion by weight of the mix IIa in the mixture Ia is from 1 to 100% by weight,

and the layer is free of an electron-conducting, electro-chemically active compound,

and

B) at least one second layer which comprises a polymeric binder and an electron-conducting, electrochemically active compound,

wherein the first layer or layers and the second layer or layers are joined to one another by one of the two methods V1 or V2:

V1) Lamination of the first layer or layers with the second layer or layers under the action of heat or under the action of heat and pressure, or

V2) Corona treatment of the first layer or layers, the second layer or layers or the first layer or layers and the second layer or layers and subsequent bringing together of the corona-treated first layer or layers with the corona-treated second layer or layers.

14. A composite comprising

Ab) at least one first layer which comprises a mixture Ib comprising a mix IIb consisting of

a) from 1 to 95% by weight of a solid III, preferably a basic solid, having primary particle size of from 5 nm to 20 µm and

b) from 5 to 99% by weight of a polymer IX obtainable by polymerization

of

b1) from 5 to 75% by weight, based on the polymer IX, of a free-radically polymerizable compound X selected from the group consisting of olefinic hydrocarbons, (meth) acrylonitrile, halogens containing olefinic compounds, vinyl alcohol, vinyl acetate, N-vinylpyrrolidone, N-vinylimidazole, vinyl formamide, phosphonitrilic chlorides and derivatives thereof which are partly or completely substituted by alkoxy, phenoxy amino and fluoroalkoxy groups, aromatic olefinic compounds and vinyl ethers, and which is different from the carboxylic acid or the sulfonic acid VII or a derivative thereof, or a mixture of two or more thereof,

and

b2) from 25 to 95% by weight, based on the polymer IX, of a further compound VIII having a mean molecular weight (number average) of at least 5000 and polyether segments in the main chain or a side chain,

where the proportion by weight of the mix Ib is from 1 to 100% by weight

and the layer is free of an electron-conducting, electrochemically active compound, and

B) at least one second layer comprises an election-conducting electrochemically active compound,

wherein the first layer or layers and the second layer or layers are joined to one another by one of the two methods V1 or V2:

V1) Lamination of the first layer or layers with the second layer or layers under the action of heat or under the action of heat and pressure, or

V2) Corona treatment of the first layer or layers, the second layer or layers ore the first layer or layers and the second layer or layers and subsequent bringing together of the corona-treated or untreated second layer or layers.

15. A composite comprising:

at least one first layer Aa or at least one first layer Ab or at least one first layer Aa and at least one first layer Ab,

at least one second layer B, each as claimed in claim 13 and

C) at least one bonding layer.

16. A composite as claimed in claim 15, wherein the bonding layer or layers C has/have a melting point which is lower than the melting point of the first layer or layers or the second layer or layers or the first and second layer or layers.

17. A composite as claimed in claim 15, wherein the bonding layer or layers C is/are a polyethylene oxide, a polyvinyl ether, a polyacrylate, a polymethacrylate, polyvinylpyrrolidone, a polyurethane, a wax-like (co)polyolefin, a rubber-like material, polyisobutylene or a mixture of two or more thereof.

18. A composite as claimed in claim 15, wherein the bonding layer or layers C comprise(s) a solid III, a plasticizer or a combination of two or more thereof.

19. A process for producing a composite as claimed in claim 13, which comprises joining the first layer or layers and the second layer or layers and, if present, the bonding layer or layers to one another by hot lamination.

20. A process for producing a composite as claimed in claim 14, which comprises joining the first layer or layers and the second layer or layers and, if present, the bonding layer or layers to one another by hot lamination.

21. A process for producing a composite as claimed in claim 13, which comprises subjecting the first layer or layers or the second layer or layers or the first layer or layers and the second layer or layers to a corona treatment and subsequently joining the first corona-treated layer or layers to the second corona-treated or untreated layer or layers.

22. A process for producing a composite as claimed in claim 14, which comprises applying at least one bonding layer to the first layer or layers, the second layer or layers or the first and the second layer or layers and subsequently joining the first layer or layers to the second layer or layers via the bonding layer or layers.

23. A process for producing a composited as claimed in claim 15, which comprises applying at least one bonding layer to the first layer or layers, the second layer or layers or the first and the second layer or layers and subsequently joining the first layer or layers to the second layer or layers via the bonding layer or layers.

24. Method of using a composite as claimed in claim 13 for producing an electrochemical cell, in a sensor, an electrochromic window, a display, a capacitor or an ion-conducting film.

25. Method of using a composite as claimed in claim 14 for producing an electrochemical cell, in a sensor, an electrochromic window, a display, a capacitor or an ion-conducting film.

26. Method of using a composite as claimed in claim 15, for producing an electrochemical cell, in a sensor, an electrochromic window, a display, a capacitor or an ion-conducting film.

27. An electrochemical cell comprising a composite as claimed in claim 13 or a combination of two or more thereof.

28. An electrochemical cell comprising a composite as claimed in claim 14 or a combination of two or more thereof.

29. A electrochemical cell comprising a composite as claimed in claim 15 or a combination of two or more thereof.

30. Method of using the electrochemical cell as claimed claim 23 as an automobile battery, instrument battery, planar battery or polymer battery.

31. A composite comprising

at least one first layer Aa or at least one first layer Ab, or at least one first layer Aa and at least one first layer Ab,

at least one second layer B, each as defined in claim 14, and

C) at least one bonding layer.

32. A composite as claimed in claim 31, wherein the bonding layer or layers C has/have a melting point which is lower than the melting point of the first layer or layers or the second layer or layers or the first and second layer or layers.

33. A composite as claimed in claim 31, wherein the bonding layer or layers C is or/are a polyethylene oxide, a polyvinyl ether, a polyacrylate, a polymethacrylate, polyvinylpyrrolidone, a polyurethane, a wax-like (co)polyolefin, a rubber-like

material, polyisobutylene or a mixture of two or more thereof.

34. A composite as claimed in claim 31, wherein the bonding layer or layers C comprise(s) a solid III, a plasticizer or a combination of two or more thereof.

35. A process for producing a composite as claimed in claim 31, which comprises applying at least one bonding layer to the first layer or layers, the second layer or layers or the first and second layer or layers and subsequently joining the first layer or layers to the second layer or layers via the bonding layer or layers.

36. The method of using a composite as claimed in claim 31 for producing an electrochemical cell, in a sensor, an electrochromic window, a display, a capacitor or an ion-conducting film.

37. An electrochemical cell comprising a composite as claimed in claim 31 or a combination of two or more thereof.

38. The use of the electrochemical cell as claimed in claim 27 as an automobile battery, instrument battery, planar battery or polymer battery.

39. The use of the electrochemical cell as claimed in claim 28 as an automobile battery, instrument battery, planar battery or polymer battery.

40. The use of the electrochemical cell as claimed in claim 29 as an automobile battery, instrument battery, planar battery or polymer battery.

41. The use of the electrochemical cell as claimed in claim 37 as an automobile battery, instrument battery, planar battery or polymer battery.